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Surajudeen Olowolayemo, Coordinator/ Ocean Bulk Shipments

Jesse Gastelle, Rail/Fruit and Vegetables Analyst

April Taylor, Container Shipments/ Fruit and Vegetables Analyst



#### Costs of Transporting Grain to Mexico Fell in First Quarter 2023

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Because Mexico is a major importer of U.S. grain, low transportation and landed costs for U.S.-Mexico routes are vital to the competitiveness of U.S. grain in Mexico and globally. U.S. grain is transported to Mexico either by cross-border land movements or by sea movements to Mexican ports for inland distribution. This article examines the costs of transporting U.S. grain to Mexico over land to Guadalajara (land routes) and by sea to Veracruz (water routes), tracking changes over time (table 1).

Quarter-to-quarter transportation costs. From fourth quarter 2022 to first quarter 2023 (quarter to quarter), total transportation costs decreased for grain (corn, soybeans, and wheat) shipped by all water and land routes. Falling transportation costs reflected lower truck, barge, rail (public tariff, plus fuel surcharge), and ocean freight rates. Lower-than-normal grain inspections and export sales softened demand for barges (Grain Transportation Report (GTR), April 13, 2023). Additionally, by first quarter 2023, navigation conditions on the Mississippi River had improved since all-time low water levels were recorded in fourth guarter 2022 (GTR, January 26, 2023). All of these factors—soft barge demand and improved river-navigation conditions—led to a significant drop in barge rates. Truck rates fell partly because of a quarter-to-quarter drop in diesel fuel prices (GTR, May 4, 2023, fig. 13). Rail rates fell because of a decline in fuel surcharges. Ocean freight rates fell because of seasonally low shipping demand caused by various holidays around the world (GTR, May 4, 2023).

Year-to-year transportation costs. From fourth quarter 2022 to fourth quarter 2023 (year to year), total costs of shipping all grain—U.S. corn, soybeans, and wheat—to Mexico by the water routes fell because of lower truck, barge, and ocean freight rates. Total costs of shipping all grain to Mexico by the land routes rose mainly because of higher rail rates.

<sup>&</sup>lt;sup>1</sup> Water routes typically involve truck transportation to barge to oceangoing vessel, or truck to rail to oceangoing vessel.





**Quarter-to-quarter landed costs.** Quarter to quarter, landed costs fell for all grain shipped via the water routes and fell for wheat shipped by the land routes. Landed costs rose for corn and soybeans shipped over land. For seaborne corn and soybeans, the lower landed costs reflected a decrease in transportation costs that exceeded the increase in farm values (table 1 and figs. 1 and 2). For wheat shipped by the land and water routes, drops in both the transportation costs and farm values pushed down the landed costs. However, for corn and soybeans shipped by the land routes, higher landed costs reflected an increase in farm values that exceeded the decrease in transportation costs. The share of landed costs comprising transportation ranged from 10 percent to 20 percent for the water routes and from 18 percent to 31 percent for the land routes.

**Year-to-year landed costs**. Year to year, landed costs increased for all waterborne corn and soybeans, and all landroute grain. These rises reflected an increase in one or both landed-cost components—i.e., transportation costs and farm values.

**U.S. Exports to Mexico**: According to <u>USDA's Federal Grain Inspection Service</u>, Mexico imported 3.81 million metric tons (mmt) of U.S. corn, 1.37 mmt of U.S. soybeans, and 0.80 mmt of U.S. wheat in first quarter 2023. Quarter to quarter, U.S. inspections for export to Mexico increased 3 percent for corn, fell 15 percent for soybeans, and increased 2 percent for wheat. Year to year, U.S. inspections destined to Mexico were down 5 percent for corn, down 18 percent for wheat, and up 7 percent for soybeans.

Ocean Freight Rates: Ocean freight rates for shipping bulk grains to Mexico fell quarter to quarter and year to year, but rose from the 4-year average. In the first quarter—via 25,000 ton-capacity vessels—the cost of shipping a metric ton (mt) of grain from the U.S. Gulf to Veracruz, Mexico, averaged \$22.39 per mt. This was down 8 percent quarter to quarter, down 132 percent year to year, and up 10 percent from the prior-4-year average. The cost of shipping by the same route in 35,000-40,000 ton-capacity vessels averaged \$18.75 per mt. This amounted to a 10-percent decrease quarter to quarter, 17-percent decrease year to year, and 8-percent increase from the prior-4-year average. During the first quarter, ocean freight rates fell in response to seasonally low shipping demand caused by various holidays around the world (*GTR*, May 4, 2023).

Railroad: In first quarter 2023, railroads transported 52,112 carloads of grain and oilseeds to Mexico, up 30 percent quarter to quarter, up 20 percent year to year, and up 33 percent from the prior-3-year average. Fuel surcharges per railcar averaged \$957, down 3 percent quarter to quarter, up 16 percent year to year, and up 190 percent from the prior-3-year average. At the end of 2022, the railroads started reporting only rates to the Mexico border, rather than reporting rates for full routes. Rail tariff rates per grain car in fourth quarter 2022 averaged \$7,789. Because comparable data was not available, USDA analysis assumed rail tariff rates to be unchanged through first quarter 2023. Based on this assumption, total rail transportation costs (tariff rates plus fuel surcharges) were up 2 percent year to year and rose 9 percent from the prior-3-year average.

### Fruit and Vegetables

In first quarter 2023, total reported shipments of fruits and vegetables by refrigerated truck from Mexico were 3.68 million tons, up 9 percent from year to year. The sum of the top five commodities increased by 144,000 tons, or 11 percent, from year to year. At 379,000 tons—an increase of 29 percent from year to year—avocados accounted for the largest reported refrigerated-truck import from Mexico by volume.

Truck rates for shipments crossing the Arizona border from Mexico and traveling 501-1,500 miles averaged \$2.87 per mile—down 2 percent quarter to quarter and down 22 percent year to year. Rates for shipments crossing the Texas-Mexico border and traveling 501-1,500 miles averaged \$3.10 per mile—up 1 percent quarter to quarter and down 18 percent year to year.

Diesel fuel prices for Texas-Mexico border crossings averaged \$4.13 per gallon for the quarter. Diesel fuel prices for Arizona-Mexico border crossings averaged \$4.65 per gallon. The Texas-Mexico border crossing had adequate availability in January and surplus availability in February and March. The Arizona-Mexico border crossing had adequate availability throughout the quarter.





Table 1. Quarterly costs of transporting U.S. grain and soybeans to Mexico

		2023								
		Water ro	oute (to \	/eracruz)		L	and rout	te (to Gua	adalajara	1)
	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg.	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg.
		US	/metric	ton			USS	\$/metric	ton	
					Co	rn				
Origin			IL					IA		
Truck	14.75				14.75	5.42				5.42
Rail <sup>1</sup>	-				-	115.97				115.97
Barge	30.28				30.28	-				-
Ocean <sup>2</sup>	18.75				18.75	-				-
Total transportation cost	63.78				63.78	121.39				121.39
Farm price <sup>3</sup>	257.99				257.99	266.00				266.00
Landed cost⁴	321.77				321.77	387.39				387.39
Transport % of landed cost	19.8				19.8	31.3				31.3
					Soyb	eans				
Origin			IL					NE		
Truck	14.75				14.75	5.42				5.42
Rail <sup>1</sup>	-				-	116.07				116.07
Barge	30.28				30.28	-				-
Ocean <sup>2</sup>	18.75				18.75	-				-
Total transportation cost	63.78				63.78	121.49				121.49
Farm price <sup>3</sup>	543.81				543.81	546.26				546.26
Landed cost <sup>4</sup>	607.59				607.59	667.75				667.75
Transport % of landed cost	10.5				10.5	18.2				18.2
					Wh	eat				
Origin			KS					KS		
Truck	5.42				5.42	5.42				5.42
Rail <sup>1</sup>	45.58				45.58	104.89				104.89
Ocean <sup>2</sup>	18.75				18.75	-				-
Total transportation cost	69.75				69.75	110.31				110.31
Farm price <sup>3</sup>	309.99				309.99	309.99				309.99
Landed cost⁴	379.74				379.74	420.30				420.30
Transport % of landed cost	18.4				18.4	26.2				26.2

<sup>&</sup>lt;sup>1</sup>Rail rates include U.S. and Mexico portions of the movement. Mexico rail rates are estimated based on actual quoted market rates. BNSF and Union Pacific quoted rail tariff rates are through rates for shuttle trains. Rail rates include fuel surcharges, but do not include the cost of purchasing empty rail cars in the secondary market, which could exceed the rail tariff rate plus the fuel surcharge shown in the table.

Note: "-" indicates data not required or applicable. Total may not add exactly because of rounding.

Source: Compiled by the USDA, Agricultural Marketing Service.

<sup>&</sup>lt;sup>2</sup>Source: O'Neil Commodity Consulting, Inc.

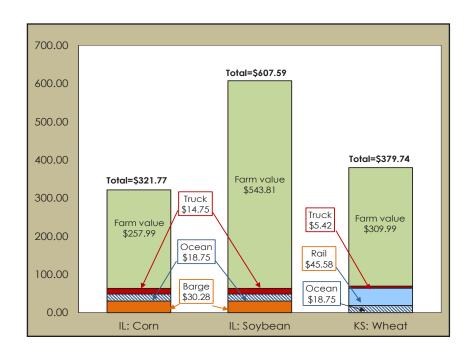
<sup>&</sup>lt;sup>3</sup>Source: USDA/NASS.

<sup>&</sup>lt;sup>4</sup>Landed cost is total transportation cost plus the farm price.





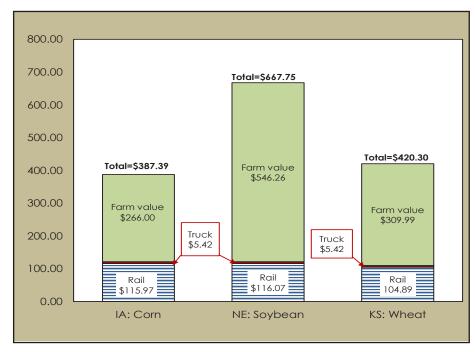
Figure 1. First-quarter 2023 water-route shipment costs (\$/mt) to Veracruz, Mexico



Note: IL = Illinois; KS = Kansas.

Source: USDA, Agricultural Marketing Service.

Figure 2. First-quarter 2023 land-route shipment costs (\$/mt) to Guadalajara, Mexico



Note: IA = Iowa; NE = Nebraska; KS = Kansas. Source: USDA, Agricultural Marketing Service.





### QUARTERLY BULK GRAIN AND SOYBEANS

Table 2. Quarterly tariff rail rates for U.S. bulk grain shipments to Mexico (US\$/car), 2023

	Origin			Tari	ff rate/c	ar <sup>1,3</sup>			Fuel sui	rcharge	per car²	2
Commodity	State	Destination	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg
	MT	Chihuahua, Cl	7,699				7,699	0				0
Wheat	ОК	Cuautitlan, EM	6,900				6,900	474				474
vviieat	KS	Guadalajara, JA	7,619				7,619	2,647				2,647
	TX	Salinas Victoria, NL	4,420				4,420	257				257
	IA	Guadalajara, JA	9,102				9,102	2,248				2,248
	SD	Celaya, GJ	8,300				8,300	0				0
Corn	NE	Queretaro, QA	8,322				8,322	769				769
Corn	SD	Salinas Victoria, NL	6,905				6,905	0				0
	МО	Tlalnepantla, EM	7,687				7,687	744				744
	SD	Torreon, CU	7,825				7,825	0				0
	МО	Bojay (Tula), HG	8,647				8,647	2,097				2,097
Souhoons	NE	Guadalajara, JA	9,207				9,207	2,153				2,153
Soybeans	IA	El Castillo, JA	9,510				9,510	0				0
	KS	Torreon, CU	8,109				8,109	1,476				1,476
	NE	Celaya, GJ	7,932				7,932	1,964				1,964
Conglesses	KS	Queretaro, QA	8,108				8,108	592				592
Sorghum	NE	Salinas Victoria, NL	6,713				6,713	475				475
	NE	Torreon, CU	7,225				7,225	1,338				1,338

<sup>&</sup>lt;sup>1</sup>Rates are based upon published tariff rates for high-capacity shuttle trains. Shuttle trains are available for qualified shipments of 75-110 cars that meet railroad efficiency requirements. The cost of obtaining empty grain cars in the Secondary Grain Car markets, which in times of high demand may exceed the tariff rate plus fuel surcharge, is not included.

 $Sources: \underline{www.bnsf.com}; \underline{www.uprr.com}; \underline{www.kcsouthern.com}.$ 

<sup>&</sup>lt;sup>2</sup>Approximate load per car = 97.87 mt: corn & sorghum 56 lbs/bu, wheat & soybeans 60 lbs/bu.

<sup>&</sup>lt;sup>3</sup>Due to tax changes in Mexico, all three Class I railroads that ship from the U.S. to Mexico (BNSF, Union Pacific, and Kansas City Southern) are only reporting rates to the border for interchange, called Rule 11 rates. Because comparable data were not available, it was assumed rail rates did not change from fourth quarter 2021 to first quarter 2022, but fuel surcharges were still updated.





Table 3. Quarterly tariff rail rates plus fuel surcharges for U.S. bulk grain shipments to Mexico, 2023

						Tariff <sup>1,3</sup>	plus fue	l surcha	rge per:			
Commodity	Origin	Doctination	US\$/metric ton Destination						US	\$/bush	el²	
Commodity	State	Destination	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg
	MT	Chihuahua, Cl	78.67				78.67	2.14				2.14
Wheat	ОК	Cuautitlan, EM	75.34				75.34	2.05				2.05
vviieat	KS	Guadalajara, JA	104.89				104.89	2.85				2.85
	TX	Salinas Victoria, NL	47.79				47.79	1.30				1.30
	IA	Guadalajara, JA	115.97				115.97	2.94				2.94
	SD	Celaya, GJ	84.81				84.81	2.15				2.15
Corn	NE	Queretaro, QA	92.89				92.89	2.36				2.36
Corn	SD	Salinas Victoria, NL	70.55				70.55	1.79				1.79
	МО	Tlalnepantla, EM	86.15				86.15	2.19				2.19
	SD	Torreon, CU	79.95				79.95	2.03				2.03
	МО	Bojay (Tula), HG	109.77				109.77	2.98				2.98
Southooms	NE	Guadalajara, JA	116.07				116.07	3.16				3.16
Soybeans	IA	El Castillo, JA	97.17				97.17	2.64				2.64
	KS	Torreon, CU	97.93				97.93	2.66				2.66
	NE	Celaya, GJ	101.11				101.11	2.57				2.57
Canabana	KS	Queretaro, QA	88.88				88.88	2.26				2.26
Sorghum	NE	Salinas Victoria, NL	73.44				73.44	1.86				1.86
	NE	Torreon, CU	87.48				87.48	2.22				2.22

<sup>&</sup>lt;sup>1</sup>Rates are based upon published tariff rates for high-capacity shuttle trains. Shuttle trains are available for qualified shipments of 75-110 cars that meet railroad efficiency requirements. The cost of obtaining empty grain cars in the Secondary Grain Car markets, which in times of high demand may exceed the tariff rate plus fuel surcharge, is not included.

Sources: www.bnsf.com; www.uprr.com; www.kcsouthern.com.

<sup>&</sup>lt;sup>2</sup>Approximate load per car = 97.87 mt: corn & sorghum 56 lbs/bu, wheat & soybeans 60 lbs/bu.

<sup>&</sup>lt;sup>3</sup>Due to tax changes in Mexico, all three Class I railroads that ship from the U.S. to Mexico (BNSF, Union Pacific, and Kansas City Southern) are only reporting rates to the border for interchange, called Rule 11 rates. Because comparable data were not available, it was assumed rail rates did not change from fourth quarter 2021 to first quarter 2022, but fuel surcharges were still updated.





Table 4. Quarterly exports of U.S. distillers' dried grains with soluble (DDGS) to Mexico\*

V		1	housand metric ton	S	
Year	1st qtr	2nd qtr	3rd qtr	4th qtr	Total
2010	439	399	424	383	1,645
2011	506	430	476	369	1,781
2012	426	388	352	332	1,498
2013	284	329	290	381	1,285
2014	356	420	366	435	1,577
2015	497	276	413	463	1,649
2016	483	467	470	490	1,910
2017	604	475	551	551	2,181
2018	516	516	514	467	2,013
2019	410	574	475	491	1,950
2020	526	344	396	476	1,742
2021	481	647	611	644	2,383
2022	584	513	604	530	2,231
2023	534				

<sup>\*</sup>Data are for brewers' and distillers' dregs and waste, of which Distillers' Dried Grains with Soluble is a principal component. Source: USDA, Economic Research Service (ERS), Feed grains database.





Table 5. Quarterly ocean freight rate for bulk grain shipments from the U.S. Gulf to Veracruz, Mexico

		US\$/me	etric ton		
Vessel capacity (metric ton)	1st qtr 2017	2nd qtr 2017	3rd qtr 2017	4th qtr 2017	Average
25,000	16.03	14.85	15.16	16.69	15.68
35-40,000	14.27	12.95	12.98	14.26	13.62
Vessel capacity (metric ton)	1st qtr 2018	2nd qtr 2018	3rd qtr 2018	4th qtr 2018	Average
25,000	16.11	16.20	16.68	17.94	16.73
35-40,000	13.97	14.07	14.68	15.63	14.59
Vessel capacity (metric ton)	1st qtr 2019	2nd qtr 2019	3rd qtr 2019	4th qtr 2019	Average
25,000	16.37	16.65	18.27	17.98	17.32
35-40,000	13.89	14.01	15.50	15.23	14.66
Vessel capacity (metric ton)	1st qtr 2020	2nd qtr 2020	3rd qtr 2020	4th qtr 2020	Average
25,000	16.37	15.31	17.20	17.40	16.57
35-40,000	13.64	12.41	14.39	14.43	13.72
Vessel capacity (metric ton)	1st qtr 2021	2nd qtr 2021	3rd qtr 2021	4th qtr 2021	Average
25,000	22.56	27.14	30.33	27.66	26.92
35-40,000	19.19	23.75	27.68	25.23	23.96
Vessel capacity (metric ton)	1st qtr 2022	2nd qtr 2022	3rd qtr 2022	4th qtr 2022	Average
25,000	25.81	30.00	27.12	24.42	26.84
35-40,000	22.51	26.27	23.33	20.73	23.21
Vessel capacity (metric ton)	1st qtr 2023	2nd qtr 2023	3rd qtr 2023	4th qtr 2023	Average
25,000	22.39				22.39
35-40,000	18.75				18.75

Source: O'Neil Commodity Consulting.





### FRUIT AND VEGETABLE

Table 6. Fruit and vegetable truck rates for shipments between 501 to 1,500 miles crossing the U.S.-Mexico border

	U	JS\$/mile			
Origin/border crossing	1st qtr 2015	2nd qtr 2015	3rd qtr 2015	4th qtr 2015	Average
Nogales, Arizona	2.41	2.5	1.4	1.94	2.06
Pharr, Texas	2.26	2.24	1.93	1.97	2.1
Origin/border crossing	1st qtr 2016	2nd qtr 2016	3rd qtr 2016	4th qtr 2016	Average
Nogales, Arizona	2.14	2.19	1.27	1.76	1.84
Pharr, Texas	2.03	2.03	1.82	1.89	1.94
Origin/border crossing	1st qtr 2017	2nd qtr 2017	3rd qtr 2017	4th qtr 2017	Average
Nogales, Ari66zona	2.05	2.32	2.45	2.38	2.3
Pharr, Texas	2.19	2.21	2	2.36	2.19
Origin/border crossing	1st qtr 2018	2nd qtr 2018	3rd qtr 2018	4th qtr 2018	Average
Nogales, Arizona	2.92	3.21	2.75	2.47	2.84
Pharr, Texas	2.95	3.13	2.27	2.34	2.67
Origin/border crossing	1st qtr 2019	2nd qtr 2019	3rd qtr 2019	4th qtr 2019	Average
Nogales, Arizona	2.52	2.7	2.52	2.21	2.49
Pharr, Texas	2.45	2.28	2.04	2.23	2.25
Origin/border crossing	1st qtr 2020	2nd qtr 2020	3rd qtr 2020	4th qtr 2020	Average
Nogales, Arizona	2.53	2.55	2.16	2.81	2.51
Pharr, Texas	2.49	2.25	2.35	2.88	2.49
Origin/border crossing	1st qtr 2021	2nd qtr 2021	3rd qtr 2021	4th qtr 2021	Average
Nogales, Arizona	3.16	3.9	2.1	3.28	3.11
Pharr, Texas	2.93	3.19	2.9	3.44	3.11
Origin/border crossing	1st qtr 2022	2nd qtr 2022	3rd qtr 2022	4th qtr 2022	Average
Nogales, Arizona	3.66	3.44	2.86	2.92	3.22
Pharr, Texas	3.77	3.5	3.01	3.08	3.34
Origin/border crossing	1st qtr 2023	2nd qtr 2023	3rd qtr 2023	4th qtr 2023	Average
Nogales, Arizona	2.87				2.87
Pharr, Texas	3.1				3.1

Source: USDA, Agricultural Marketing Service (AMS), Specialty Crops Program, Market News Division.





Table 7. Quarterly U.S.-Mexico border crossing fresh fruit and vegetables truck availability

	1st quarter 2023												
Legend: 1 =Surplus 2		2 = Sliį	ght su	rplus	3 =	3 = Adequate 4 = Sligh			short	rtage 5 = Shortage			
Truck availability													
Mexico borde	r crossings/month		Janı	uary			Febr	uary			ľ	March	
Week ending		1/3	1/10	1/17	1/31	2/7	2/14	2/21	2/28	3/7	3/14	3/21	3/28
Through Nogales, AZ	Cantalopes, Squash, Cucumbers, Mangoes, Honeydew, Watermelons	4	4	4	4	3	3	3	3	2	3	4	2
Through TX	Oranges, Grapefruit, Limes, Mangoes, Papaya, Peppers, Cucumbers, Vegetables	3	3	3	3	NA	1	1	1	4	1	1	1

Note: NA = not available.

Source: USDA, Agricultural Marketing Service (AMS), Specialty Crop Program, Market News Division, Fruit and Vegetable Truck Rate Report.

Table 8. Top ten commodities shipped by truck to the U.S. from Mexico, 2023 (1,000 metric tons)

Commodity	1st qtr 2023	Rank
Avocadoes	379	1
Cucumbers	313	2
Peppers, bell	270	3
Tomatoes, plum	256	4
Tomatoes	235	5
Squash	177	6
Watermelons, seedless	163	7
Limes	153	8
Strawberries	150	9
Peppers, other	133	10

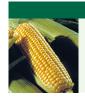




Table 9. Top five commodities shipped by truck to the U.S. from Mexico (10,000 lbs)

Commodity	1st qtr 2016	2nd qtr 2016	3rd qtr 2016	4th qtr 2016	Total 201
Tomatoes (all varieties)	131,455	89,313	51,983	66,534	339,285
Peppers (all varieties)	61,450	40,970	33,631	65,270	201,321
Avocados	60,241	37,679	34,993	40,457	173,370
Watermelons	21,726	85,723	7,560	33,670	148,679
Cucumbers	48,999	32,842	14,670	39,803	136,314
Subtotal	323,871	286,527	142,837	245,734	998,969
Other	270,078	265,393	157,375	201,602	894,448
Total	593,949	551,920	300,212	447,336	1,893,417
Commodity	1st qtr 2017	2nd qtr 2017	3rd qtr 2017	4th qtr 2017	Total 2017
Tomatoes (all varieties)	107,852	82,194	49,088	73,166	312,300
Peppers (all varieties)	67,566	38,714	31,137	59,172	196,589
Avocados	49,565	36,996	32,133	47,015	165,709
Cucumbers	47,336	32,892	16,064	44,415	140,707
Watermelons	31,890	68,086	5,264	33,293	138,533
Subtotal	304,209	258,882	133,686	257,061	953,838
Other	291,177	291,747	170,323	205,516	958,763
Total	595,386	550,629	304,009	462,577	1,912,601
Commodity	1st qtr 2018	2nd qtr 2018	3rd qtr 2018	4th qtr 2018	Total 2018
Commodity Tomatoes (all varieties)	1st qtr 2018 105,364	2nd qtr 2018 79,851	3rd qtr 2018 49,278	4th qtr 2018 62,478	Total 2018 296,971
·					
Tomatoes (all varieties)	105,364	79,851	49,278	62,478	296,971
Tomatoes (all varieties) Avocados	105,364 74,252	79,851 46,390	49,278 35,103	62,478 57,726	296,971 213,471
Tomatoes (all varieties) Avocados Peppers	105,364 74,252 55,189	79,851 46,390 49,914	49,278 35,103 35,246	62,478 57,726 49,781	296,971 213,471 190,130
Tomatoes (all varieties) Avocados Peppers Watermelons	105,364 74,252 55,189 51,964	79,851 46,390 49,914 36,452	49,278 35,103 35,246 14,131	62,478 57,726 49,781 43,288	296,971 213,471 190,130 145,835
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers	105,364 74,252 55,189 51,964 28,829	79,851 46,390 49,914 36,452 75,429	49,278 35,103 35,246 14,131 6,062	62,478 57,726 49,781 43,288 27,782	296,971 213,471 190,130 145,835 138,102
Tomatoes (all varieties)  Avocados Peppers Watermelons Cucumbers Subtotal	105,364 74,252 55,189 51,964 28,829 <b>315,598</b>	79,851 46,390 49,914 36,452 75,429 <b>288,036</b>	49,278 35,103 35,246 14,131 6,062 139,820	62,478 57,726 49,781 43,288 27,782 <b>241,055</b>	296,971 213,471 190,130 145,835 138,102 <b>984,509</b>
Tomatoes (all varieties)  Avocados Peppers Watermelons Cucumbers Subtotal Other	105,364 74,252 55,189 51,964 28,829 <b>315,598</b> 296,266	79,851 46,390 49,914 36,452 75,429 <b>288,036</b> 281,580	49,278 35,103 35,246 14,131 6,062 139,820 156,781	62,478 57,726 49,781 43,288 27,782 <b>241,055</b> 205,426	296,971 213,471 190,130 145,835 138,102 <b>984,509</b> 940,053
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers Subtotal Other Total	105,364 74,252 55,189 51,964 28,829 <b>315,598</b> 296,266 <b>611,864</b>	79,851 46,390 49,914 36,452 75,429 <b>288,036</b> 281,580 <b>569,616</b>	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601	62,478 57,726 49,781 43,288 27,782 <b>241,055</b> 205,426 <b>446,481</b>	296,971 213,471 190,130 145,835 138,102 <b>984,509</b> 940,053 <b>1,924,562</b>
Tomatoes (all varieties)  Avocados Peppers Watermelons Cucumbers Subtotal Other Total  Commodity	105,364 74,252 55,189 51,964 28,829 <b>315,598</b> 296,266 <b>611,864</b> 1st qtr 2019	79,851 46,390 49,914 36,452 75,429 <b>288,036</b> 281,580 <b>569,616</b> 2nd qtr <b>2019</b>	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019	62,478 57,726 49,781 43,288 27,782 <b>241,055</b> 205,426 <b>446,481</b> 4th qtr 2019	296,971 213,471 190,130 145,835 138,102 <b>984,509</b> 940,053 <b>1,924,562</b> Total 2019
Tomatoes (all varieties)  Avocados Peppers Watermelons Cucumbers Subtotal Other Total  Commodity Tomatoes (all varieties)	105,364 74,252 55,189 51,964 28,829 <b>315,598</b> 296,266 <b>611,864</b> 1st qtr 2019 95,760	79,851 46,390 49,914 36,452 75,429 <b>288,036</b> 281,580 <b>569,616</b> 2nd qtr <b>2019</b> 78,123	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019 55,836	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019 69,366	296,971 213,471 190,130 145,835 138,102 <b>984,509</b> 940,053 <b>1,924,562</b> Total <b>2019</b> 299,085
Tomatoes (all varieties)  Avocados Peppers Watermelons Cucumbers Subtotal Other Total  Commodity Tomatoes (all varieties) Peppers (all varieties)	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864 1st qtr 2019 95,760 65,865	79,851 46,390 49,914 36,452 75,429 <b>288,036</b> 281,580 <b>569,616</b> <b>2nd qtr 2019</b> 78,123 45,479	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019 55,836 38,006	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019 69,366 56,847	296,971 213,471 190,130 145,835 138,102 <b>984,509</b> 940,053 <b>1,924,562</b> Total <b>2019</b> 299,085 206,197
Tomatoes (all varieties)  Avocados  Peppers  Watermelons  Cucumbers  Subtotal  Other  Total  Commodity  Tomatoes (all varieties)  Peppers (all varieties)  Avocados	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864 1st qtr 2019 95,760 65,865 57,162	79,851 46,390 49,914 36,452 75,429 <b>288,036</b> 281,580 <b>569,616</b> <b>2nd qtr 2019</b> 78,123 45,479 25,622	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019 55,836 38,006 42,135	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019 69,366 56,847 58,520	296,971 213,471 190,130 145,835 138,102 <b>984,509</b> 940,053 <b>1,924,562</b> Total <b>2019</b> 299,085 206,197 183,439
Tomatoes (all varieties)  Avocados Peppers Watermelons Cucumbers Subtotal Other Total  Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Cucumbers	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864 1st qtr 2019 95,760 65,865 57,162 24,868	79,851 46,390 49,914 36,452 75,429 288,036 281,580 569,616 2nd qtr 2019 78,123 45,479 25,622 88,165	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019 55,836 38,006 42,135 11,138	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019 69,366 56,847 58,520 30,506	296,971 213,471 190,130 145,835 138,102 <b>984,509</b> 940,053 <b>1,924,562</b> Total <b>2019</b> 299,085 206,197 183,439 154,677
Tomatoes (all varieties)  Avocados  Peppers  Watermelons  Cucumbers  Subtotal  Other  Total  Commodity  Tomatoes (all varieties)  Peppers (all varieties)  Avocados  Cucumbers  Watermelons	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864 1st qtr 2019 95,760 65,865 57,162 24,868 48,614	79,851 46,390 49,914 36,452 75,429 288,036 281,580 569,616 2nd qtr 2019 78,123 45,479 25,622 88,165 34,729	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019 55,836 38,006 42,135 11,138 18,919	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019 69,366 56,847 58,520 30,506 41,334	296,971 213,471 190,130 145,835 138,102 <b>984,509</b> 940,053 <b>1,924,562</b> Total <b>2019</b> 299,085 206,197 183,439 154,677 143,596

Source: Data is obtained from the Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP) through USDA, AMS, Market News.





Commodity	1st qtr 2020	2nd qtr 2020	3rd qtr 2020	4th qtr 2020	Total 2020
Tomatoes (all varieties)	105,181	82,796	66,804	83,797	334,784
Peppers (all varieties)	72,764	47,080	39,078	60,235	217,633
Avocados	58,796	48,461	45,480	63,907	217,195
Cucumbers	51,075	71,858	12,878	47,328	154,587
Watermelons	33,236	3,6687	20,722	38,603	150,683
Subtotal	32,1052	28,6882	184,962	293,870	1,074,882
Other	287,121	304,600	191,721	241,370	1,028,093
Total	608,173	591,482	376,683	535,240	2,102,975
Commodity	1st qtr 2021	2nd qtr 2021	3rd qtr 2021	4th qtr 2021	Total 2021
Tomatoes (all varieties)	119,801	90,736	77,009	87,045	374,591
Peppers (all varieties)	85,890	57,801	42,944	67,413	254,048
Avocados	74,254	58,525	44,100	60,319	237,198
Cucumbers	54,355	81,417	31,188	51,131	184,903
Watermelons	38,041	48,229	14,332	34,991	15,607
Subtotal	372,341	336,708	209,573	300,899	1,208,347
Other	338,366	364,523	232,163	247,863	1,181,488
Total	710,707	701,231	441,736	548,762	2,389,835
Commodity	1st qtr 2022	2nd qtr 2022	3rd qtr 2022	4th qtr 2022	Total 2022
Commodity Tomatoes (all varieties)	1st qtr 2022 107,847	2nd qtr 2022 94,495	3rd qtr 2022 84,287	4th qtr 2022 92,668	Total 2022 379,297
•			· ·	· ·	
Tomatoes (all varieties)	107,847	94,495	84,287	92,668	379,297
Tomatoes (all varieties) Peppers (all varieties)	107,847 79,451	94,495 53,250	84,287 39,669	92,668 54,831	379,297 227,201
Tomatoes (all varieties) Peppers (all varieties) Avocados	107,847 79,451 58,684	94,495 53,250 39,754	84,287 39,669 43,174	92,668 54,831 63,620	379,297 227,201 205,232
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons	107,847 79,451 58,684 55,289	94,495 53,250 39,754 48,494	84,287 39,669 43,174 30,653	92,668 54,831 63,620 45,636	379,297 227,201 205,232 180,072
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers	107,847 79,451 58,684 55,289 26,762	94,495 53,250 39,754 48,494 70,132	84,287 39,669 43,174 30,653 8,979	92,668 54,831 63,620 45,636 36,822	379,297 227,201 205,232 180,072 142,695
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total	107,847 79,451 58,684 55,289 26,762 <b>328,033</b> 345,147 <b>673,180</b>	94,495 53,250 39,754 48,494 70,132 <b>306,125</b> 366,998 <b>673,123</b>	84,287 39,669 43,174 30,653 8,979 <b>206,762</b>	92,668 54,831 63,620 45,636 36,822 <b>293,577</b>	379,297 227,201 205,232 180,072 142,695 <b>1,134,497</b>
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other	107,847 79,451 58,684 55,289 26,762 <b>328,033</b> 345,147	94,495 53,250 39,754 48,494 70,132 <b>306,125</b> 366,998	84,287 39,669 43,174 30,653 8,979 <b>206,762</b> 234,550	92,668 54,831 63,620 45,636 36,822 <b>293,577</b> 271,000	379,297 227,201 205,232 180,072 142,695 <b>1,134,497</b> 1,217,695
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total	107,847 79,451 58,684 55,289 26,762 <b>328,033</b> 345,147 <b>673,180</b>	94,495 53,250 39,754 48,494 70,132 <b>306,125</b> 366,998 <b>673,123</b>	84,287 39,669 43,174 30,653 8,979 <b>206,762</b> 234,550 <b>441,312</b>	92,668 54,831 63,620 45,636 36,822 <b>293,577</b> 271,000 <b>564,577</b>	379,297 227,201 205,232 180,072 142,695 <b>1,134,497</b> 1,217,695 <b>2,352,192</b>
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties)	107,847 79,451 58,684 55,289 26,762 <b>328,033</b> 345,147 <b>673,180</b> 1st qtr 2023	94,495 53,250 39,754 48,494 70,132 <b>306,125</b> 366,998 <b>673,123</b>	84,287 39,669 43,174 30,653 8,979 <b>206,762</b> 234,550 <b>441,312</b>	92,668 54,831 63,620 45,636 36,822 <b>293,577</b> 271,000 <b>564,577</b>	379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados	107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023 114,171	94,495 53,250 39,754 48,494 70,132 <b>306,125</b> 366,998 <b>673,123</b>	84,287 39,669 43,174 30,653 8,979 <b>206,762</b> 234,550 <b>441,312</b>	92,668 54,831 63,620 45,636 36,822 <b>293,577</b> 271,000 <b>564,577</b>	379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023 114,171
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties)	107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023 114,171 80,619	94,495 53,250 39,754 48,494 70,132 <b>306,125</b> 366,998 <b>673,123</b>	84,287 39,669 43,174 30,653 8,979 <b>206,762</b> 234,550 <b>441,312</b>	92,668 54,831 63,620 45,636 36,822 <b>293,577</b> 271,000 <b>564,577</b>	379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023 114,171 80,619
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados	107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023 114,171 80,619 75,768	94,495 53,250 39,754 48,494 70,132 <b>306,125</b> 366,998 <b>673,123</b>	84,287 39,669 43,174 30,653 8,979 <b>206,762</b> 234,550 <b>441,312</b>	92,668 54,831 63,620 45,636 36,822 <b>293,577</b> 271,000 <b>564,577</b>	379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023 114,171 80,619 75,768
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Cucumbers	107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023 114,171 80,619 75,768 62.605	94,495 53,250 39,754 48,494 70,132 <b>306,125</b> 366,998 <b>673,123</b>	84,287 39,669 43,174 30,653 8,979 <b>206,762</b> 234,550 <b>441,312</b>	92,668 54,831 63,620 45,636 36,822 <b>293,577</b> 271,000 <b>564,577</b>	379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023 114,171 80,619 75,768 62,605
Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Cucumbers Squash	107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023 114,171 80,619 75,768 62.605 35,477	94,495 53,250 39,754 48,494 70,132 <b>306,125</b> 366,998 <b>673,123</b>	84,287 39,669 43,174 30,653 8,979 <b>206,762</b> 234,550 <b>441,312</b>	92,668 54,831 63,620 45,636 36,822 <b>293,577</b> 271,000 <b>564,577</b>	379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023 114,171 80,619 75,768 62,605 35,477

Source: Data is obtained from the Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP) through USDA, AMS, Market News.





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#### Related Websites:

- U.S. Grain and Soybean Exports to Mexico A Modal Share Transportation Analysis (PDF)
- Grain Transportation Report
- Agricultural Refrigerated Truck Quarterly

#### Data Sets (all XLS files):

- Figure 1: First-quarter 2023 water-route shipment costs (\$/mt) to Veracruz, Mexico
- Figure 2: First-quarter 2023 land-route shipment costs (\$/mt) to Guadalajara, Mexico
- Table 1: Quarterly costs of transporting U.S. grain and soybeans to Mexico
- Table 2: Quarterly tariff rail rates for U.S. bulk grain shipments to Mexico (US\$/car), 2023
- Table 3: Quarterly tariff rail rates plus fuel surcharge for U.S. bulk grain shipments to Mexico, 2023
- Table 4: Quarterly exports of U.S. Distillers' Dried Grains with Soluble (DDGS) to Mexico
- Table 5: Quarterly ocean freight rate for bulk shipments from the U.S. Gulf to Veracruz, Mexico
- <u>Table 6: Fruit and vegetable truck rates for shipments between 501 and 1,500 miles crossing the U.S.-Mexico border</u>
- Table 7: Quarterly U.S.-Mexico border crossing fresh fruit and vegetables truck availability
- Table 8: Top ten commodities shipped by truck to the U.S. from Mexico, 2023 (1,000 metric tons)
- Table 9: Top five commodities shipped by truck to the U.S. from Mexico (10,000 lbs)

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